

# Appendix A

## Actions on Previous MDPH Recommendations

The following is a status report of actions taken on MDPH recommendations (**in bold**). The summary is based on reports from the Saugus Inspectional Services/Building Department, Saugus School Department Officials, and documents, as well as photographs and observations made by MDPH staff.

- **Continue to work with HVAC engineer to repair the ventilation control system. Have engineer survey classrooms for univent function to ascertain if an adequate air supply exists for each room. Consider having univent fresh air control dampers calibrated school-wide.**

**Action Taken:** All HVAC equipment was repaired and operational. However, the univent system at the Lynnhurst Elementary school does not run continuously, it is wired to be activated by thermostat. The thermostat activates the univent system at a preset temperature. Once the preset temperature is reached, the HVAC system is deactivated. Therefore no mechanical ventilation is provided until the thermostat reactivates the system. The “cycling” of univent fans results in poor air exchange in classrooms throughout the school as evidenced by elevated carbon dioxide levels (Table 1). CEH staff were informed, in subsequent conversation with Mr. Materissi, Director of the Saugus Building Department, that an HVAC engineering firm, Johnson Controls, Inc., has been contracted to assess current conditions and needs for repairs to mechanical ventilation systems in several of Saugus’s public schools, including the LES.

- **To maximize air exchange, the MDPH recommends that both supply and exhaust ventilation operate continuously during periods of school occupancy independent of classroom thermostat control.**

**Action Taken:** See above.

- **Inspect rooftop exhaust motors and belts for proper function, repair and replace as necessary.**

**Action Taken:** All exhaust vents were operating during the reassessment.

- **Remove all blockages from univents and exhaust vents. Clean out interiors of univents regularly (e.g. with filter changes).**

**Action Taken:** Blockages were removed and staff were instructed not to prevent airflow. CEH staff inspected the interior of univents and found several of them with dust/debris accumulation and cobwebs (Pictures A-1 and A-2).

- **Continue working with roofing contractor to eliminate leaks in the gym/cafeteria. Replace any water-stained ceiling tiles and building materials. Examine the area above and around these areas for mold growth. Disinfect areas of water leaks with an appropriate antimicrobial.**

**Action Taken:** The roof has been repaired/patched in a number of areas (Pictures A-3 and A-4). Leak-prone areas around the gym/cafeteria have been sealed and flashing has been installed/repared (Pictures A-5 and A-6). No current leaks were reported or observed. In addition, the Saugus Building Department reported that they have contracted with a roofing company to conduct an annual assessment to provide a written report on roof conditions.

- **Seal areas around sinks to prevent water-damage to the interior of cabinets and adjacent wallboard. Inspect wallboard for water-damage and mold/mildew growth, repair/replace as necessary. Disinfect areas of microbial growth with an appropriate antimicrobial as needed. Consider replacing with one-piece, molded countertops.**

**Action Taken:** Several of the countertops were replaced with molded one piece countertops (Picture A-7). A number of classrooms were observed during the reassessment with spaces between the sink and backsplash (Picture A-8).

- **Replace wall panel or permanently seal open utility hole on exterior of building.**

**Action Taken:** The hole on the exterior of the building was sealed (Picture A-9).

- **Store cleaning products properly and out of reach of students.**

**Action Taken:** Cleaning products continued to be stored in unlocked cabinets and on countertops in reach of children (Picture A-10). Many of these products appeared to be brought from home without the knowledge of school personnel who maintain material data safety sheets (MSDS) for chemicals used in the school. Therefore it is unlikely that MSDSs for these materials are available on site.

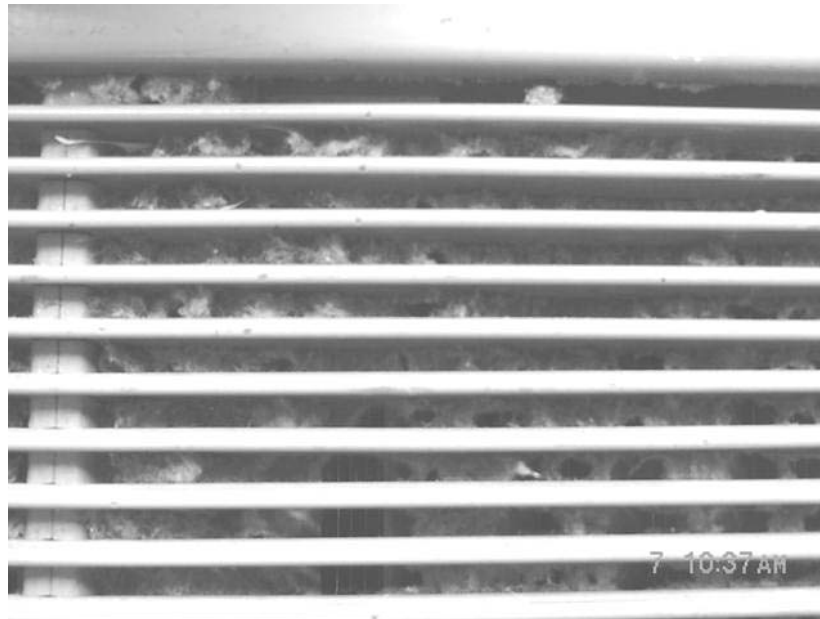
- **Relocate or consider reducing the amount of materials stored in classrooms to allow for more thorough cleaning. Clean items regularly with a wet cloth or sponge to prevent excessive dust build-up.**

**Action Taken:** Overall clutter was reduced, more work needs to be done in certain areas. Dust control and general cleaning needs to be improved, especially inside unit ventilator cabinets (Picture A-1 and A-2)

In addition to the above actions, a number of other activities to improve building conditions at the LES have been completed. These actions included the following actions.

- Replacement of loose/broken window panes throughout the building (A-11 and A-12). At the time of the reassessment the large majority of windows had been replaced with the remainder to be done over April/Summer vacation 2006.
- Re-caulking/sealing of window systems (A-11 and A-12).
- Installation of weathertight exterior doors (Picture A-12).
- Wall panels were replaced and outfitted with “backer rods” which prevent water penetration through the building envelope.
- Drainage was improved around the exterior of the building by creating an asphalt apron at the base of exterior walls to direct water away from the building towards drains (Pictures A-13 and A-14).

**Picture A-1**



**Dust/Debris in Classroom Univent Air Diffuser**

**Picture A-2**



**Cobwebs in Classroom Univent Cabinet**

**Picture A-3**



**Roof Patch**

**Picture A-4**



**Sealed Roof Seam on Rubber Membrane**

**Picture A-5**



**Flashing Installed over end of Masonry in Area of Leaks in the Gym/Cafeteria**

**Picture A-6**



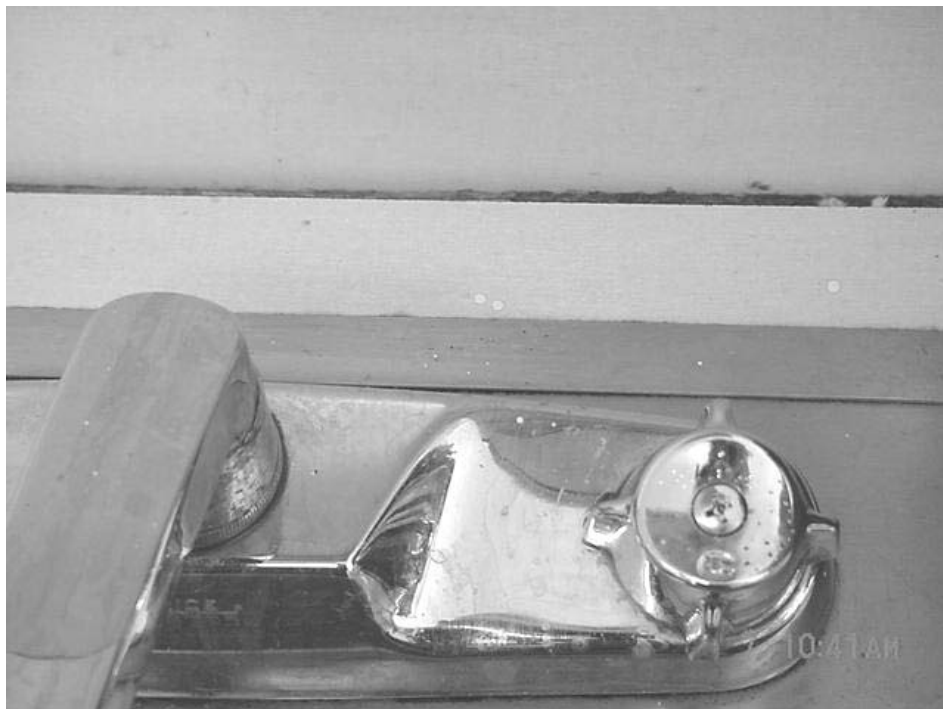
**Sealant Compound in Area of Leaks in the Gym/Cafeteria**

**Picture A-7**



**One-Piece Molded Countertop in Classroom**

**Picture A-8**



**Spaces between Sink Countertop and Backsplash**

**Picture A-9**



**Sealed Hole in Exterior Wall Panel**

**Picture A-10**



**Spray Cleaning Products and Degreaser under Classroom Sink**

**Picture A-11**



**Replacement of Windows and Resealing of Window Panes**

**Picture A-12**



**New Window Panes and Exterior Door**

**Picture A-13**



**Asphalt Apron Directing Water away From Building towards Drain**

**Picture A-14**



**Asphalt Apron Directing Water away From Building**